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opi.mt.gov

Grades 6-11 Mathematics Practice Test (Smarter Balanced Assessment)

Welcome!

- Thank you for joining us!
- Please write down three questions you have about the SMARTER Balanced Assessment and its impact on instruction.
- Set the questions aside and hopefully we will answer them during this presentation. If not, we will address the remaining questions at the end of the presentation.

Goals for this session

- Familiarization with the Smarter Balanced online Practice Test
- Discussions on **instructional practices** using standards documents and sample SBAC items

Mathematics Common Core Structure

- Mathematics Standards
  - K – 12 Content Standards
    - K – 8 Critical Areas by Grade Level
      - K
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
    - HS Conceptual Categories
      - Number and Quantity
      - Algebra
      - Functions
      - Geometry
      - Probability and Statistics
      - Modeling
  - Standards for Mathematical Practice (Apply daily to all grade levels)

Grouping the practice standards

1. Make sense of problems and persevere in solving them
6. Attend to precision

2. Reason abstractly and quantitatively

3. Construct viable arguments and critique the reasoning of others

Reasoning and explaining

4. Model with mathematics

5. Use appropriate tools strategically

Modeling and using tools

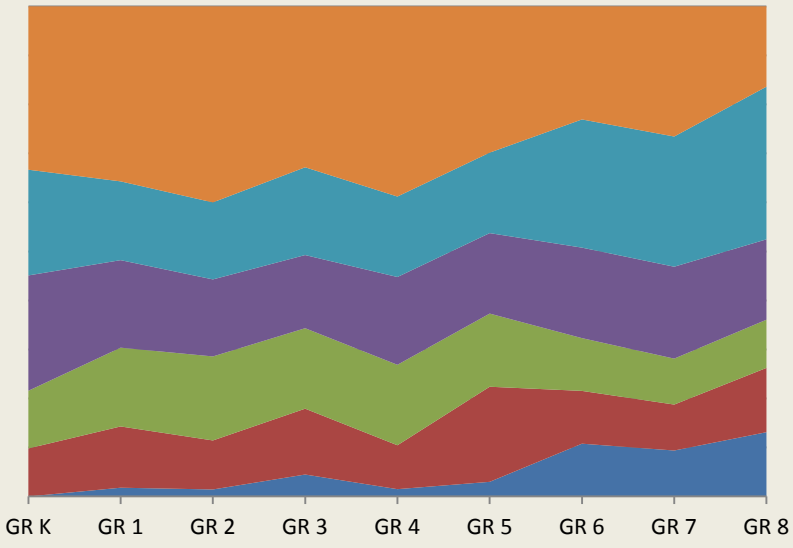
7. Look for and make use of structure.

8. Look for and express regularity in repeated reasoning.

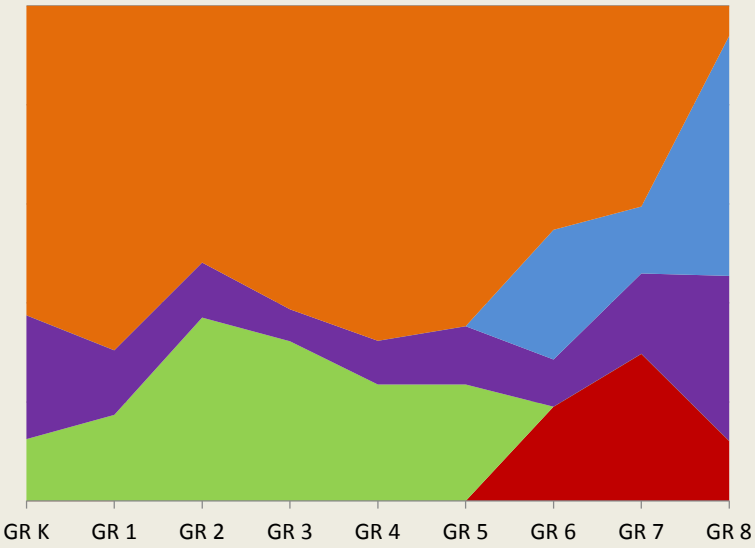
Seeing structure and generalizing

Previous vs. Current Expectations

Previous State Standards



Common Core State Standards



Mathematics Learning Progressions

<table>
<tr><td>Kindergarten</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>HS</td></tr>
<tr><td colspan="2"><u>Counting and Cardinality</u></td><td colspan="7"></td><td rowspan="3"><u>Number and Quantity</u></td></tr>
<tr><td colspan="5"><u>Number and Operations in Base Ten</u></td><td colspan="2"><u>Ratios and Proportional Relationships</u></td><td></td></tr>
<tr><td colspan="2"></td><td colspan="3"><u>Number and Operations - Fractions</u></td><td colspan="3"><u>The Number System</u></td></tr>
<tr><td colspan="5" rowspan="2"><u>Operations and Algebraic Thinking</u></td><td colspan="3"><u>Expressions and Equations</u></td><td><u>Algebra</u></td></tr>
<tr><td colspan="2"></td><td colspan="2"><u>Functions</u></td></tr>
<tr><td colspan="10"><u>Geometry</u></td></tr>
<tr><td colspan="5"><u>Measurement and Data</u></td><td colspan="5"><u>Statistics and Probability</u></td></tr>
</table>

Shifts in Mathematics

1. **Focus:** Focus strongly where the standards focus.
2. **Coherence**: *Think* across grades, and *link* to major topics
3. **Rigor:** In major topics, pursue *conceptual* **understanding,** procedural skill and *fluency*, and *application*

Purpose of Smarter Balanced Assessment Approach

Content Specifications …

- Create a bridge between standards and assessment and, ultimately, instruction
- Organize the standards around major constructs & big ideas
- Express what students should learn and be able to do

Smarter Balanced Assessment Consortium

A Shift Away from "Cookie Cutter" Items

From

The numbers 0 and 1 are shown on the number line. Put a point on the line to represent the number 3/5.

To

The numbers 0 and 3/5 are shown on the number line. Put a point on the line to represent the number 1.

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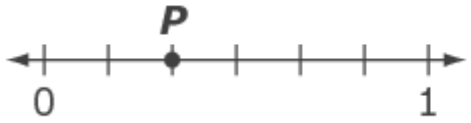
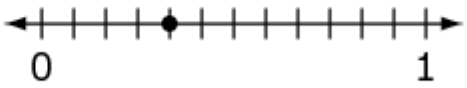
Selected Response Example

43044

Look at point *P* on the number line.



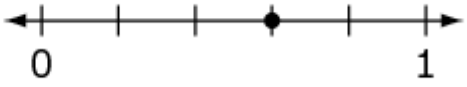
Look at number lines A – E. Is the point on each number line equal to the number shown by *P*? Choose Yes or No.

A. 

○ Yes ○ No

B. 

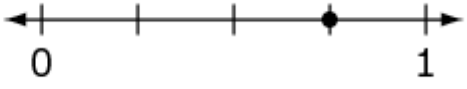
○ Yes ○ No

C. 

○ Yes ○ No

D. 

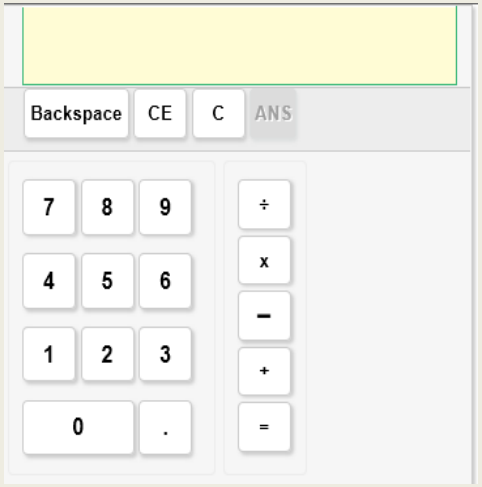
○ Yes ○ No

E. 

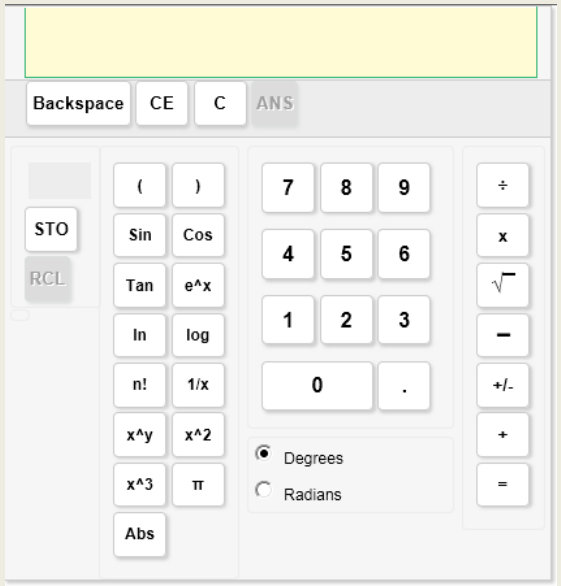
○ Yes ○ No

Calculators

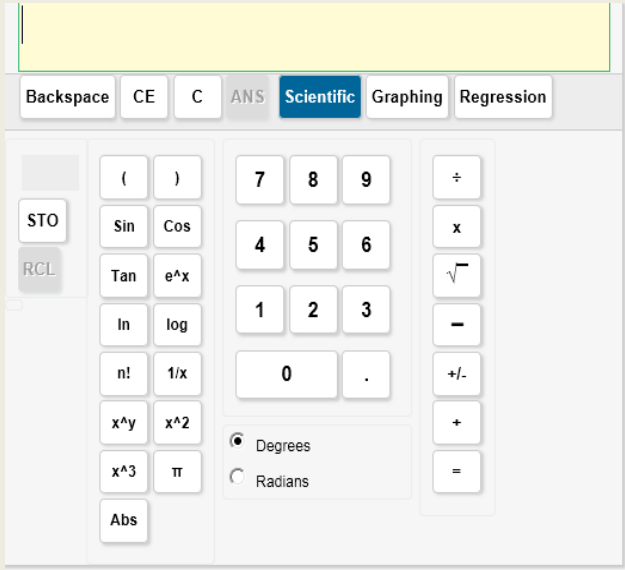
Basic Calculator: Grade 6



Scientific Calculator: Grades 7 & 8



Graphing, Regression, and Scientific Calculators: Grade 11

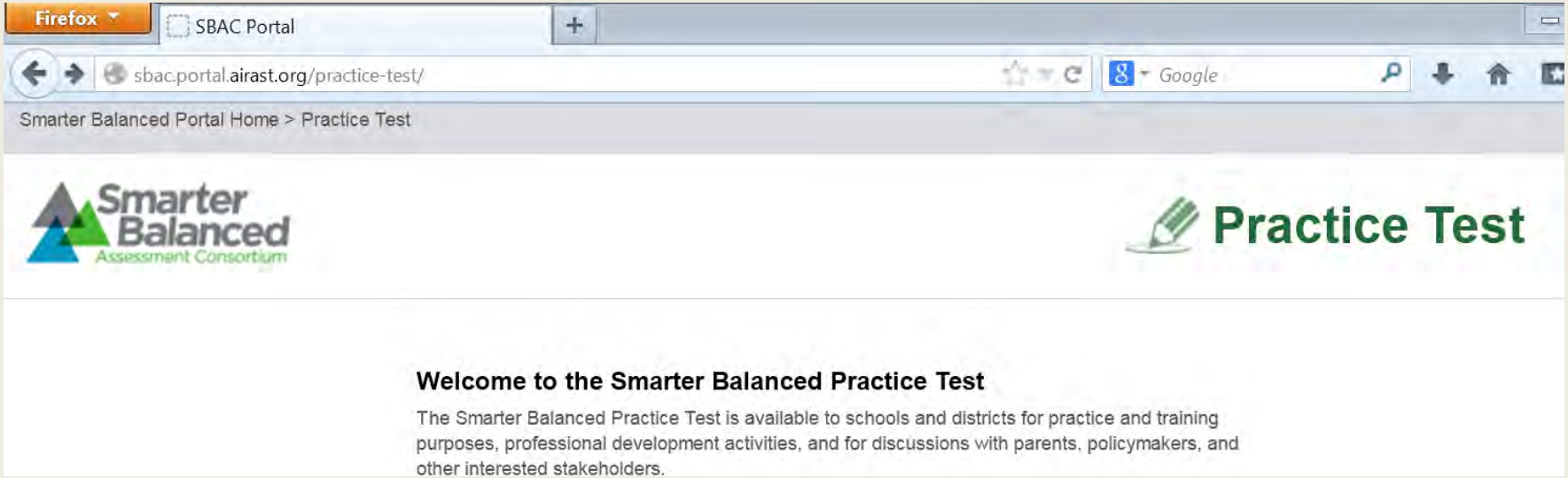


Basic Calculator

Scientific Calculator

Graphing, Regression, & Scientific

Practice Test Portal

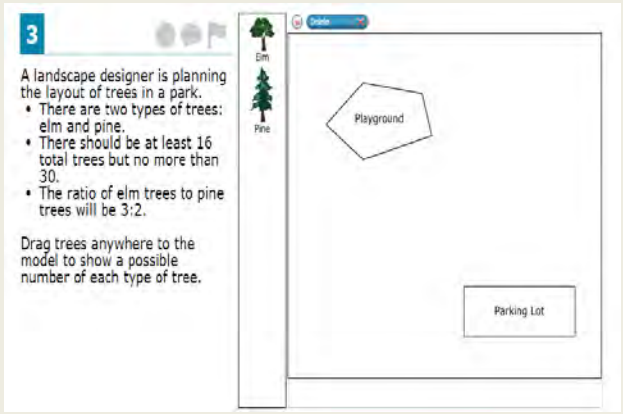


NOTE! The practice test can ONLY be opened in the following browsers:

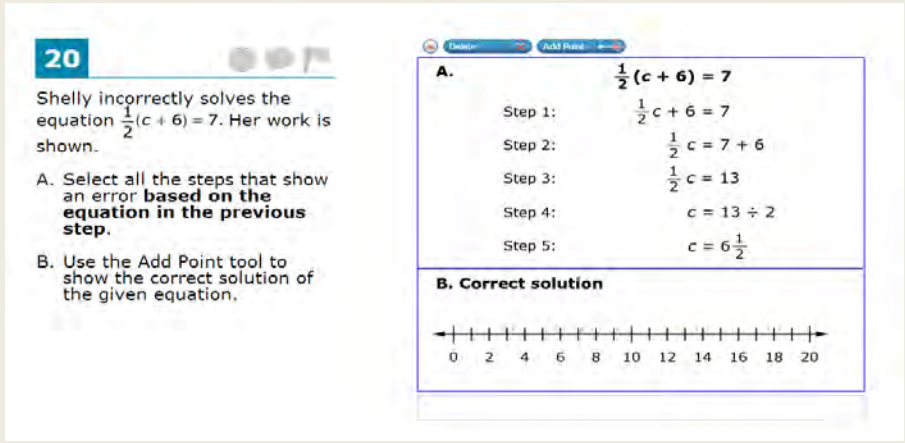
- Mozilla Firefox
- Google Chrome
- Microsoft Internet Explorer 10
- Apple Safari
- http://sbac.portal.airast.org/practice-test/

Getting on Board with the Mathematics 6-11

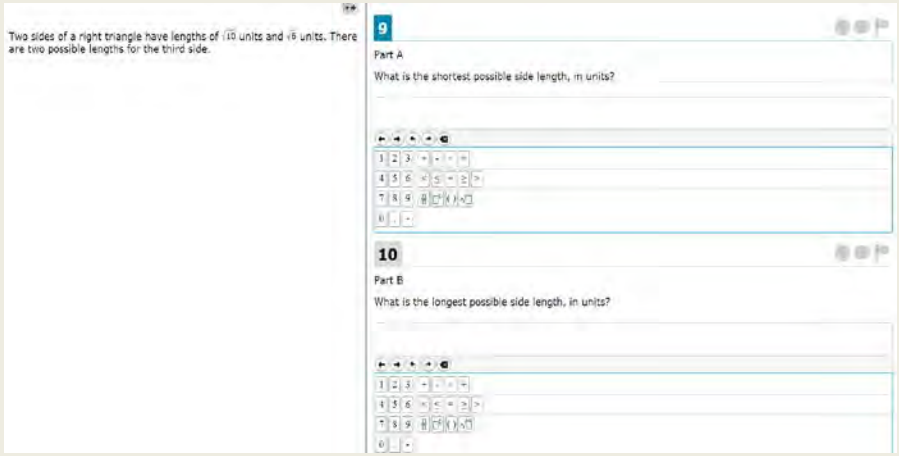
Grade 6 Practice Test Item



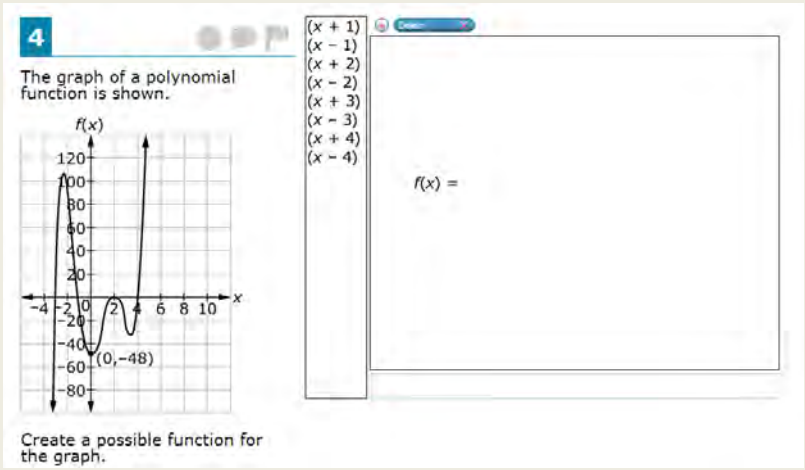
Grade 7 Practice Test Item



Grade 8 Practice Test Item



Grade 11 Practice Test Item



Implications for Instruction

Private Think Time (PTT):

- What are the content expectations for current grade, previous grades, and subsequent grades?
- What are the mathematical practices expectations?
- What are the implications for instruction grades 6-11?
- What instructional strategies could be implemented to enhance the students' learning towards the assessment goals?

Go Around One Protocol

- **PURPOSE**---to hear all “voices”
  - One person at a time shares
  - Others listen to understand but do not respond
  - Rotate to next person and continue in same fashion

Implications for Instruction

- In your group, use the Go Around One Protocol:
  - What are the content expectations for current grade, previous grades, and subsequent grades?
  - What are the mathematical practices expectations?
  - What are the implications for instruction grades 6-11?
  - What instructional strategies could be implemented to enhance the students' learning towards the assessment goals?
- General Discussion and Responses

Implications for Instruction

Share your group's consensus thoughts:

- What are the content expectations for current grade, previous grades, and subsequent grades?
- What are the mathematical practices expectations?
- What are the implications for instruction grades 6-11?
- What instructional strategies could be implemented to enhance the students' learning towards the assessment goals?

Recap the Goals for This Session

- Familiarization with the Smarter Balanced online Practice Test
- Discussions on **instructional practices** using standards documents and sample SBAC items

Questions?

- Please look at the questions you set aside at the beginning of the presentation.

- We would like to address any remaining questions you may have about the SMARTER Balanced Assessment and the implications for instruction.

Thank You!

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